

KEY WORDS: RECTANGLE, CIRCLE, RADIUS, LENGTH, WIDTH, AREA, SHADED REGION, SUBTRACT

Name \_\_\_\_\_

Date FACTS (FORMULAS)

ALG. 2 Constructed Response #7

$$A_{\square} = \ell \cdot w$$

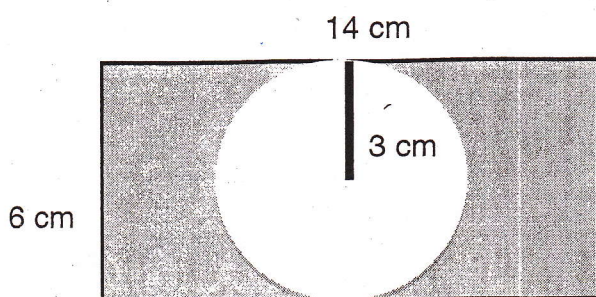
$$A_{\circ} = \pi R^2$$

$$\pi \approx 3.14$$

Rubric:

1. State in your own words what kind of information is given (1-3 sentences) ..... - 1 point
  2. What is the objective? (What do you have to do to solve the problem?) (1-2 sentences).... - 1 point
  3. Show all calculations and explain all steps to solve the problem (4-7 sentences).  
Make tables, drawings, and graphs if necessary ..... - 7 points
  4. Make a conclusion. Write down the answer with short comment(s) (1-2 sentences)..... - 1 point
- Total - 10 points

Find the area of the shaded region.



1. WE ARE GIVEN RECTANGLE  
WITH LENGTH  $\ell = 14 \text{ cm}$   
AND WIDTH  $w = 6 \text{ cm}$   
AND CIRCLE WITH  
RADIUS  $R = 3 \text{ cm}$

2. WE HAVE TO FIND THE AREA OF SHADED  
REGION IN  $\text{cm}^2$

3. FIRST, WE FIND THE AREA OF THE  
RECTANGLE  $A_{\square} = \ell \cdot w = 14 \cdot 6 = 84 \text{ cm}^2$

THEN, WE FIND THE AREA OF THE  
CIRCLE  $A_{\circ} = \pi R^2 = \pi \cdot 3^2 = \pi \cdot 9 = 3.14 \cdot 9 =$   
 $= 28.26 \text{ cm}^2$

TO FIND THE AREA OF THE SHADED  
REGION, WE SUBTRACT THE AREA OF THE  
CIRCLE FROM THE AREA OF THE RECTANGLE

$$A = A_{\square} - A_{\circ} = 84 - 28.26 = 55.74 \text{ cm}^2$$

4. THE AREA OF THE SHADED REGION IS

$$A = 55.74 \text{ cm}^2$$